



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**10.05.2006 Bulletin 2006/19**

(51) Int Cl.:  
**G06T 15/50 (2006.01)**

(43) Date of publication A2:  
**30.03.2005 Bulletin 2005/13**

(21) Application number: **04255728.0**

(22) Date of filing: **21.09.2004**

(84) Designated Contracting States:  
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR  
HU IE IT LI LU MC NL PL PT RO SE SI SK TR**  
Designated Extension States:  
**AL HR LT LV MK**

- **Watanabe, Osamu,**  
**c/o Sony Corporation**  
**Tokyo (JP)**
- **Nagasaki, Tanio,**  
**c/o Sony Corporation**  
**Tokyo (JP)**
- **Inada, Tetsugo**  
**c/o Sony-Kihara R. C. Inc.**  
**Tokyo (JP)**

(30) Priority: **25.09.2003 JP 2003334203**

(71) Applicant: **SONY CORPORATION**  
**Tokyo 141-0001 (JP)**

(74) Representative: **Mills, Julia et al**  
**D Young & Co**  
**120 Holborn**  
**London EC1N 2DY (GB)**

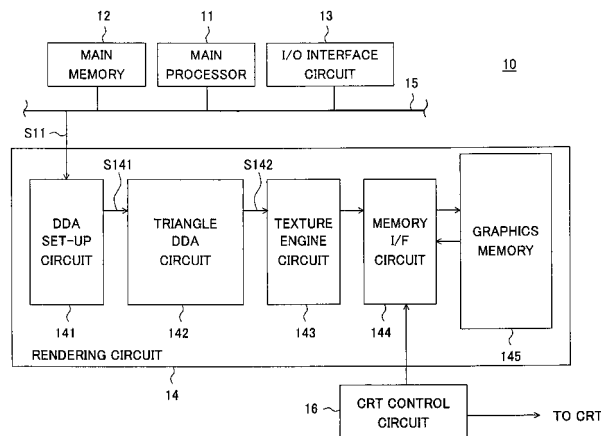
(72) Inventors:  
• **Nakahashi, Teruyuki**  
**c/o Sony-Kihara R. C. Inc.**  
**Tokyo (JP)**

(54) **Method and apparatus for antialiased blending in image rendering**

(57) An image processing apparatus capable of realizing accurate anti-aliasing with a small memory, without being affected by the order of drawing, and without inducing a drop in the drawing speed, including an anti-aliasing system obtaining edge information from an image after drawing, determining a processing content necessary for the anti-aliasing, and performing the determined processing. Specifically, either of the information of a z-buffer and the information of the normal vector at

each pixel obtained at the time of drawing, or both information, is scanned or by the information of normal vectors restored from the information of the z-buffer is used, a state machine for holding the state and a counter for measuring the continuity of an edge are prescribed, the value of which pixel adjacent in which direction to each pixel on each edge and what kind of ratio to use for blending are determined, and the determined values are used for blending. This is performed successively until the pixel values are updated.

FIG. 1





ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.

EP 04 25 5728

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

15-03-2006

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2002167532	A1	14-11-2002	US 6429877 B1	06-08-2002
US 5123085	A	16-06-1992	AU 7564391 A	21-10-1991
			DE 69131927 D1	24-02-2000
			DE 69131927 T2	19-10-2000
			EP 0521084 A1	07-01-1993
			JP 3277280 B2	22-04-2002
			JP 5507372 T	21-10-1993
			KR 9612669 B1	23-09-1996
			WO 9114995 A1	03-10-1991
US 4780711	A	25-10-1988	DE 3687668 D1	18-03-1993
			DE 3687668 T2	19-08-1993
			EP 0199502 A2	29-10-1986
			JP 2071633 C	10-07-1996
			JP 7099451 B	25-10-1995
			JP 62024297 A	02-02-1987
US 2003095134	A1	22-05-2003	EP 1371012 A2	17-12-2003
			WO 02077919 A2	03-10-2002
US 5668940	A	16-09-1997	WO 9820460 A1	14-05-1998
EP 0600709	A	08-06-1994	DE 69328230 D1	04-05-2000
			DE 69328230 T2	10-08-2000
			US 5504847 A	02-04-1996
EP 1094421	A	25-04-2001	NONE	